Dysphagia in Statin Induced Necrotizing Myopathy: An Uncommon Cause of Dysphagia in Adults

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INTRODUCTION

- Myositis, a common complication of statin therapy, can cause disruption in the mechanism of muscles participating in swallowing.
- Dysphagia due to statin induced myopathy is a rare condition.
- Statin generally is well tolerated and commonly used to reduce cardiovascular risk.

Case Description

A 58-year-old male with metabolic syndrome on statin therapy, was admitted for progressive solid food dysphagia, weakness, and myalgia.

- Initial vital signs were within normal limits. Physical exam was significant for profound weakness in all extremities.
- Initial labs were significant for an elevated creatine kinase (CK) of 19,387 U/L suggestive of rhabdomyolysis.
- CK continued to remain elevated despite aggressive fluid resuscitation.
- Statin therapy was subsequently held.
- Additional work up included a muscle biopsy which demonstrated severe necrotizing myopathy.
- Given the muscle biopsy findings in setting of statin use, 3-Hydroxy-3-Methylglutaryl-Coenzyme A Reductase (HMGCR) IgG antibodies were checked and found to be significantly elevated at above 550 CU (normal less than 20 CU).

Diagnosis:
Patient was then diagnosed with Anti-HMGCoA Reductase Positive Immune Mediated Necrotizing Myopathy (anti-HMGCR positive IMNM).

- Patient was then started on immunosuppressive therapy.
- Given ongoing dysphagia and inability to fulfill all nutritional needs, patient underwent percutaneous endoscopic gastrostomy tube placement.

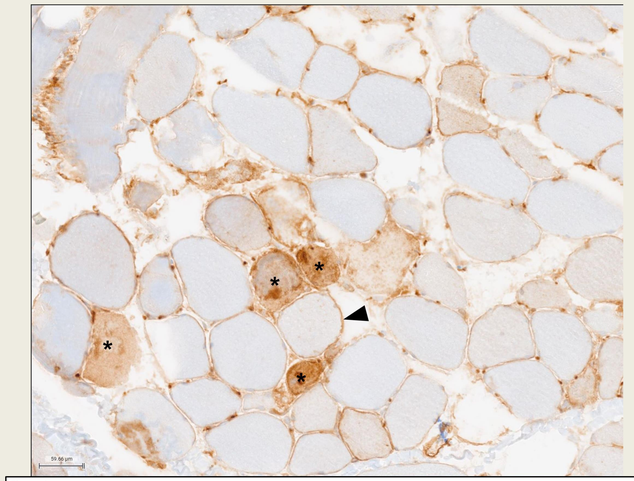

Figure 1:
MHC class I immunohistochemistry shows diffuse expression along the sarcolemma (example at arrowhead) of non-necrotic/non-regenerating myofibers, which is supportive of immune mediated necrotizing myopathy. There is also MHC class I expression in necrotic and regenerating myofibers (asterisks), which is non-specific.

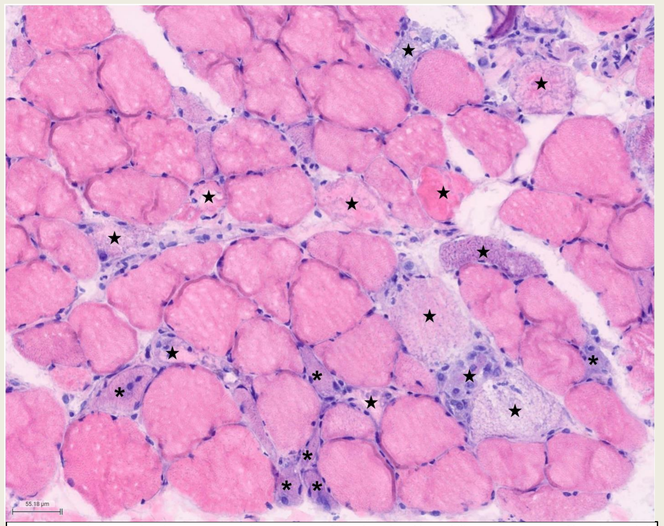

Figure 2: Muscle biopsy showing numerous pale necrotic myofibers (stars) and basophilic regenerating myofibers (asterisks) in varying stages of necrosis and regeneration. Image courtesy of Dr. Mari Perez-Rosendahl MD, University of California, Irvine.

DISCUSSION

- IMNM is a type of auto-immune myopathy that is debilitating due to characteristics of severe muscle weakness and possible muscle necrosis.
- Biopsy of patients with necrotizing myositis will show myofiber necrosis. The distinguishing feature of HMG-CoA reductase IMNM is the presence of statin therapy.
- The duration of statin therapy does not appear to affect the development of IMNM.
- Prior studies have shown that about 6 percent of patients with biopsy proven IMNM also found to have positive anti-HMGCR antibodies.
- Of those patients with positive antibodies on muscle biopsy, 80 percent had history of statin therapy.

CONCLUSIONS

- Although statin therapy is indicated for many patients, profound myositis can manifest.
- Early detection and treatment is important as this may slow progression of statin induced myopathy.
- Severe progression can cause esophageal dysphagia leading to percutaneous endoscopic gastrostomy tube placement.

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